CLAIMS

[c1] 1. A method in a routing device for retrieving an identification of a destination port for data, the data being received through a source port and having an address, the method comprising:

when a cache associated with the source port has an identification of a port associated with the address of the data, retrieving the identification of the port from the cache; and

when a cache associated with the source port does not have the identification of a port associated with the address of the data and when a table shared by multiple ports including the source port has the identification of a port associated with the address of the data, retrieving of the identification of the port from the table.

[c2] 2. The method of claim 1 including storing the identification of the port retrieved from the table in the cache associated with the source port.

[c3] 3. The method of claim 1 wherein the cache and the table contain port maps that designate one or more ports.

[c4] 4. The method of claim 1 wherein the address of the data is a virtual address.

[c5] 5. The method of claim 1 including:

when a table shared by multiple ports including the source port does not have the identification of a port associated with the address of the data, retrieving the identification of the port from a source external to the routing device.

[c6] 6. The method of claim 5 including storing the identification of the port retrieved from the source external to the routing device in the table.

[c7] 7. The method of claim 1 wherein the table is shared by four ports.

[c8] 8. The method of claim 1 wherein the table is shared by multiple ports.

[c9] 9. The method of claim 1 wherein each port is associated with its own cache.

[c10] 10. The method of claim 1 wherein the address is a portion of a Fibre Channel frame.

[c11] 11. The method of claim 1 wherein the address is a portion of an InfiniBand frame.

[c12] 12. The method of claim 1 wherein the table is a virtual address label table.

[c13] 13. The method of claim 1 wherein the routing device is an interconnect fabric module.

[c14] 14. The method of claim 1 wherein the routing device is Fibre Channel compatible.

[c15] 15. The method of claim 1 wherein the routing device is InfiniBand compatible.

[c16] 16. The method of claim 1 wherein the address is a domain address.

[c17] 17. A routing device comprising:

a shared collection of mappings of identifiers to destination ports of the routing device; and

a plurality of source ports, each source port having

a cache for storing mappings of identifiers to destination ports of the routing device;

a component that retrieves an identification of a destination port from the cache when the cache has a mapping of an identifier associated with communication received at the source port to a destination port; and

a component that retrieves an identification of a destination port from the shared collection when the cache does not have a mapping of the identifier associated with the communication received at the source port to a destination port.

[c18] 18. The routing device of claim 17 wherein the component that retrieves the identification of a destination port from the collection stores the identification of the destination port retrieved from the collection in the cache.

[c19] 19. The routing device of claim 17 wherein the cache and the collection contain port maps that designate one or more ports.

[c20] 20. The routing device of claim 17 wherein the identifier of the communication is a virtual identifier.

[c21] 21. The routing device of claim 17 including a component that retrieves the identification of the port from a source external to the routing device when the collection does not have a mapping from the identifier of the communication to a destination port.

[c22] 22. The routing device of claim 21 wherein the component that retrieves the identification of the port from a source external to the routing device stores the identification of the destination port retrieved from the source external to the routing device in the collection.

[c23] 23. The routing device of claim 17 wherein the collection is shared by multiple source ports.

[c24] 24. The routing device of claim 17 wherein the identifier is a portion of a Fibre Channel frame.

[c25] 25. The routing device of claim 17 wherein the identifier is a portion of an InfiniBand frame.

[c26] 26. The routing device of claim 17 wherein the collection is a virtual identifier label table.

[c27] 27. The routing device of claim 17 wherein the routing device is a switch.

[c28] 28. The routing device of claim 17 wherein the routing device is an interconnect fabric module.

[c29] 29. The routing device of claim 17 wherein the routing device is Fibre Channel compatible.

[c30] 30. The routing device of claim 17 wherein the routing device is InfiniBand compatible.

[c31] 31. The routing device of claim 17 wherein the address is a domain address.

[c32] 32. The routing device of claim 17 wherein the address is part of a virtual identifier.

[c33] 33. A method in a routing device for retrieving an identification of a destination port for a communication, the communication being received through a source port and having an identifier, the method comprising:

when a cache has an identification of a port associated with the identifier of the communication, retrieving the identification of the port from the cache; and

when the cache does not have the identification of a port associated with the identifier of the communication and when a mapping shared by multiple ports including the source port has the identification of a port associated with the identifier of the communication, retrieving of the identification of the port from the mapping.

[c34] 34. The method of claim 33 including storing the identification of the port retrieved from the mapping in the cache.

[c35] 35. The method of claim 33 wherein the cache and the mapping contain port maps that designate one or more ports.

[c36] 36. The method of claim 33 wherein the identifier of the communication is a virtual address.

[c37] 37. The method of claim 33 including:

when the mapping shared by multiple ports including the source port does not have the identification of a port associated with the address of

the communication, retrieving the identification of the port from a source external to the routing device.

[c38] 38. The method of claim 37 including storing the identification of the port retrieved from the source external to the routing device in the mapping.

[c39] 39. The method of claim 33 wherein each port is associated with its own cache.

[c40] 40. The method of claim 33 wherein the identifier is a portion of a Fibre Channel frame.

[c41] 41. The method of claim 33 wherein the identifier is a portion of an InfiniBand frame.

[c42] 42. The method of claim 33 wherein the mapping is a label table.

[c43] 43. The method of claim 33 wherein the routing device is an interconnect fabric module.

[c44] 44. The method of claim 33 wherein the identifier is a domain address.

[c45] 45. A routing device comprising:

means for mapping identifiers to destination ports in a shared collection; and

means for mapping identifiers to destination ports in a cache collection for each of a plurality of ports;

means for retrieving an identification of a destination port from the cache collection when the cache collection has a mapping of an identifier associated with a communication to a destination port; and

means for retrieving an identification of a destination port from the shared collection when the cache collection does not have a mapping of the identifier associated with the communication to a destination port.

[c46] 46. The routing device of claim 45 wherein the means for retrieving the identification of a destination port from the shared collection includes means for storing a mapping of the identifier to the retrieved identification of the destination port in the cache collection for the source port that received the communication.

[c47] 46. The routing device of claim 45 wherein the cache collection and the shared collection contain port maps that designate one or more ports.

[c48] 47. The routing device of claim 45 wherein the identifier of the communication is a virtual identifier.

[c49] 49. The routing device of claim 45 including means for retrieving the identification of the port from a source external to the routing device when the shared collection does not have a mapping from the identifier of the communication to a destination port.

[c50] 50. The routing device of claim 49 wherein the means for retrieving the identification of the port from a source external to the routing device stores the identification of the destination port retrieved from the source external to the routing device in the shared collection.

[c51] 51. The routing device of claim 45 wherein the shared collection is shared by multiple source ports.

[c52] 52. The routing device of claim 45 wherein the identifier is a portion of a Fibre Channel frame.

[c53] 53. The routing device of claim 45 wherein the identifier is a portion of an InfiniBand frame.

[c54] 54. The routing device of claim 45 wherein the shared collection is a virtual identifier label table.

[c55] 55. The routing device of claim 45 wherein the routing device is an interconnect fabric module.

[c56] 56. The routing device of claim 45 wherein the identifier is a domain address.

[c57] 57. The routing device of claim 45 wherein the identifier is part of a virtual identifier.